

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 79-24

NPDES NO. CA0037737

WASTE DISCHARGE REQUIREMENTS FOR:

NORTH SAN MATEO COUNTY SANITATION DISTRICT
SAN MATEO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. The North San Mateo County Sanitation District (hereinafter called discharger), by application dated August 31, 1978, has applied for renewal of waste discharge requirements and a permit to discharge wastes under the National Pollutant Discharge Elimination System.
2. The discharger presently discharges an annual average of 5.4 million gallons per day (mgd) of treated municipal wastewater containing pollutants into the Pacific Ocean a water of the United States. The discharger has completed expansion and upgrading of the primary treatment facilities to secondary. Design capacity is 8.0 mgd. Discharge occurs as described below:
 - a. Treated wastewater is discharged to an open storm channel just before it goes underground through the Vista Grande Tunnel. There it combines with any storm water present and is discharged through a 33-inch ocean outfall which is 2,700 feet offshore from the end of the Vista Grande Tunnel structure on Ocean Beach, San Francisco County. Whenever the hydraulic capacity of the outfall and the Vista Grande Tunnel is exceeded, treated wastewater is discharged via a recently constructed force main directly to the outfall, and storm water overflows the discharge system.
 - b. Approximately 10-20 times per year during wet weather, the hydraulic capacity of the Vista Grande Tunnel is exceeded and storm water overflows the open channel and floods John Muir Drive. Usually when this occurs the excess flows reenter the channel when the rain recedes. Approximately two times per year the flooding is high enough to overflow into Lake Merced.
 - c. Occasionally storm water is discharged through the tide gates at the end of Vista Grande Tunnel and overflows across the ocean beach. Such discharge occurs only when the hydraulic capacity of the outfall is exceeded.

- d. As part of the proposed water reclamation project, the Discharger will ultimately divert an average of 4.5 mgd of treated wastewater for landscape irrigation. The reclamation project, currently under design, includes the construction of transmission and distribution lines and storage facilities. Wastewater not used for the purpose of irrigation will be discharged through the existing outfall into the Pacific Ocean. The proposed wastewater reclamation project is governed by this Board's Order No. 78-71.
3. The discharger has constructed approximately 3,000 feet of force main between the treatment facilities and the outfall and has modified the outfall structure. Overflows of a combination of waste water and storm water has thereby been eliminated.
4. The State Water Resources Control Board, in January 1978, adopted the revised "Water Quality Control Plan for Ocean Waters of California" which contains water quality objectives for the Pacific Ocean.
5. The beneficial uses of the Pacific Ocean are:
 - a. Recreation
 - b. Industrial water supply
 - c. Esthetic enjoyment
 - d. Navigation
 - e. Preservation and enhancement of fish, wildlife and other marine resources or preserves
6. The discharge is presently governed by Waste Discharge Requirements Order No. 74-87 which allows discharge to Pacific Ocean.
7. The Discharger has prepared a final Environmental Impact Report dated January 1974, on the expansion and upgrading of the District's treatment facilities to secondary, in accordance with the California Environmental Quality Act (Public Resources Code Section 2100 et. seq.)
8. The project will have no significant adverse effects on the environment.
9. The Board has notified the discharger and interested agencies and persons of its intent to prescribe revised waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
10. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the North San Mateo County Sanitation District in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Federal Water Pollution Control Act, and regulations and guidelines adopted thereunder shall comply with the following:

A. Discharge Prohibitions

1. Discharge within 1,000 feet offshore from the extreme low waterline and where the waste will not receive a minimum dilution ratio of 100:1 as it reaches the surface is prohibited.
2. There shall be no bypass or overflow of untreated wastewater to waters of the State, either at the treatment plant or from the collection system.
3. The average dry weather flow shall not exceed 8.0 mgd. Average shall be determined over three consecutive months each year.
4. The discharge of municipal and industrial waste sludge directly to the ocean, or into a waste stream that discharges to the ocean, shall be prohibited. The discharge of sludge digester supernatant directly to the ocean, or into a waste stream that discharges to the ocean without further treatment shall be prohibited.

B. Effluent Limitations

1. The discharge of an effluent containing constituents in excess of the following limits is prohibited:

<u>Constituents</u>	<u>Units</u>	<u>7-Day Average</u>	<u>30-Day Average</u>	<u>Maximum Daily</u>	<u>Instant- aneous Maximum</u>
a. Chlorine Residual	mg/l	—	—	—	0.0
b. BOD	mg/l	45	30	60	—
	lbs/day	—	3532	7065	—
	kg/day	—	1598	3197	—
c. Suspended Solids	mg/l	45	30	60	—
	lbs/day	—	3532	7065	—
	kg/day	—	1598	3197	—
d. Settleable Solids	ml/l-hr	—	0.1	—	0.2
e. Oil and Grease	mg/l	—	10	20	—
	lbs/day	—	1177	2355	—
	kg/day	—	533	1066	—
f. Turbidity	JTU	100	75	—	225

2. The arithmetic mean of the biochemical oxygen demand (5-day, 20°C) and suspended solids values, by weight, for effluent samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for an influent samples collected at approximately the same times during the same period (i.e. 85% BOD and Suspended Solids Removal).
3. The discharge shall not have a pH of less than 6.0 nor greater than 9.0.
4. Representative samples of the effluent shall not exceed the following limits more than the percentage indicated: ^{3/}

<u>Constituent</u>	<u>Unit of Measurement</u>	<u>50% of time</u>	<u>10% of time</u>
Arsenic	mg/l	0.01	0.02
Cadmium	mg/l	0.02	0.03
Total Chromium	mg/l	0.005	0.01
Copper	mg/l	0.2	0.3
Lead	mg/l	0.1	0.2
Mercury	mg/l	0.001	0.002
Nickel	mg/l	0.1	0.2
Silver	mg/l	0.02	0.04
Zinc	mg/l	0.3	0.5
Cyanide	mg/l	0.1	0.2
Phenolic Compounds	mg/l	0.5	1.0
Ammonia (expressed as nitrogen)	mg/l	40	60
Total Identifiable Chlorinated Hydrocarbons ^{1/}	mg/l	0.002	0.004
Toxicity Concentration ^{2/}	tu	1.5	2.0
Radioactivity	Not to exceed limits specified in Section 30269 of the California Administrative Code.		

^{1/} Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

^{2/} Method of Calculation is in the "Water Quality Control Plan for Ocean Waters of California," January 1978.

^{3/} If the discharger is unable to comply with these limitations and can show good cause for such failure, the Board will consider modification of these limits.

C. Receiving Water Limitations

1. Floating particulates and grease and oil shall not be visible.
2. The discharge of waste shall not cause esthetically undesirable discoloration of the ocean surface.
3. The transmittance of natural light shall not be significantly^{1/} reduced at any point outside the initial dilution zone.^{1/}
4. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.^{1/}
5. Within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, the following bacteriological requirements shall be maintained throughout the water column:
 - (a.) Samples of water from each sampling station shall have a concentration of coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).
 - (b.) The fecal coliform concentration based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 30-day period exceed 400 per 100 ml.
6. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.
7. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.
8. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.
9. The concentration of organic materials in marine sediments shall not be increased above that which would degrade^{1/} marine life.
10. Nutrient materials shall not cause objectionable aquatic growths or degrade^{1/} indigenous biota.
11. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.

^{1/}As defined in the "Water Quality Control Plan for Ocean Waters of California" January 1978.

12. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.
13. The discharge shall not cause toxic or other deleterious substances to be present in waters of the State in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
14. This discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 74-87 adopted by the Board on September 17, 1974.
2. The discharger shall comply with all effluent and receiving water limitations, prohibitions, and provisions of this Order immediately upon adoption.
3. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977.
4. The discharger shall comply with the attached Self-Monitoring Program as ordered by the Executive Officer.
5. This permit shall be modified, or alternatively revoked and reissued as soon as practicable, to incorporate an approved Publicly owned treatment work (POTW) pretreatment program or a compliance schedule for the development of a POTW pretreatment program as required under Section 402(b)(8) of the Clean Water Act and implementing regulations or by the requirements of the approved state pretreatment program, as appropriate.
6. If the discharger elects to document compliance with the coliform receiving water limitation exclusively in the effluent and so notifies the Board, in writing, the frequency of receiving water coliform monitoring will be reduced accordingly; PROVIDED, HOWEVER, that if such election is made, a violation of the coliform requirement in the effluent shall constitute a violation of the coliform receiving water limitation.

7. This Order expires on February 20, 1984, and the discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, subchapter 9 of the California Administrative Code no later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.
8. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective ten (10) days after date of its adoption provided the Regional Administrator, Environmental Protection Agency has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on February 20, 1979.

FRED H. DIERKER
Executive Officer

Attachments:

Standards Provisions, Reporting Requirements and Definitions, dated April 1977
Self-Monitoring Program

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

North San Mateo County Sanitation District

San Mateo County

NPDES NO. CA 0037737

ORDER NO. 79-24

CONSISTS OF

PART A

AND

PART B

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT AND INTAKE

<u>Station</u>	<u>Description</u>
A-1	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present. (May be the same as E-001-D)
E-001-D	At any point in the disinfection facilities for Waste E-001 at which point adequate contact with the disinfectant is assured.

C. RECEIVING WATERS

Receiving water sampling stations shall be located at waters edge at the following distances from the outfall sewer:

<u>Station</u>	<u>Description</u>
C	At the outfall sewer
C-1-N	50 feet north of outfall sewer
C-2-N	100 feet north of outfall sewer
C-3-N	500 feet north of outfall sewer
C-1-S	50 feet south of outfall sewer
C-2-S	100 feet south of outfall sewer
C-3-S	500 feet south of outfall sewer

D. OVERFLOWS AND BYPASSES

<u>Station</u>	<u>Description</u>
OV-1 through OV-'n'	Bypass or overflows from manholes, pump stations, or collection system. Note: Initial SMP report to include map and description of each known bypass or overflow location. <u>Reporting</u> - Shall be submitted monthly and include date, time, and period of each overflow or bypass.

E. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
P-1 through P-'n'	Located at the corners and midpoints of the perimeter fenceline surrounding the treatment facilities (A sketch showing the location of these stations will accompany each report.)
S-1 through S-'n'	All of the shoreline from 1,000 feet north of the outfall line to 1,000 feet south of the outfall line.

I, Fred H. Dierker, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board NPDES Permit No. CA0037737, Order No. 79-24.
2. Does not include the following paragraphs of Part A:

C-3, C-4, C-5:d.
3. Has been ordered by the Executive Officer on February 20, 1979 and became effective immediately.
4. May be reviewed at any time subsequent to the effective date upon notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

FRED H. DIERKER
Executive Officer

Attachment:
Table I

TABLE 1

[illegible]

TABLE I (continued)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A	E-001			E-001-D		All Sta ^C	All Sta ^{P&S}	All Sta ^{OV}				
TYPE OF SAMPLE	C-24	G	C-24	Cont	G	C-24	G	O	O				
Mercury (mg/l & kg/day)			3M										
Nickel (mg/l & kg/day)			3M										
Zinc (mg/l & kg/day)			3M										
PHENOLIC COMPOUNDS (mg/l & kg/day)			3M										
All Applicable Standard Observations		D					2W	2W	2W				
Bottom Sediment Analyses and Observations													
Total Identifiable Chlorinated Hydrocarbons (mg/l & kg/day)			3M										
Radioactivity (UCi/l or UCi/kg)			Y										

During any day when bypassing occurs from any treatment unit(s) in the plant, the monitoring program for the effluent E-001-D shall include the following in addition to the above schedule for sampling, measurement, and analyses:

1. Composite sample for BOD, total suspended solids, oil and grease.
2. Grab sample for Coliform (total and fecal), settleable matter, and chlorine residual (continuous or every two hours).
3. Continuous monitoring of flow.

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
Cont = continuous sampling
O = observation

TYPES OF STATIONS

A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
S = shoreline

FREQUENCY OF SAMPLING

E = each occurrence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour 2H = every 2 hours
2/W = 2 days per week 2D = every 2 days
5/W = 5 days per week 2W = every 2 weeks
2/M = 2 days per month 3M = every 3 months
2/Y = once in April and Cont = continuous
once in September

FOOTNOTES FOR TABLE I

- (1) Oil and grease sampling shall consist of 3 grab samples taken at equal hour intervals during the sampling day, with each grab being collected in a glass container and analyzed separately. Results shall be expressed as a weighted average of the 3 values, based upon the instantaneous flow rates at the time each grab sample was collected.
- (2) Grab sample
- (3) 5 samples per station each day
- (4) Samples should be collected within one foot below the surface of the receiving water body
- (5) C2-N, C3-N, C2-S, C3-S only